Maricopa County
Air Quality Department

AIR QUALITY DEPARTMENT
1001 North Central Avenue
Phoenix, AZ 85004

Abengoa Solar, Inc.
ATTN: Emiliano Garcia Sanz
57750 S Painted Rock Dam Road
Gila Bend, AZ 85337

The purpose of the letter is to inform you that the application for a permit renewal 1.0.0.0 and permit revision 1.1.0.0 have been approved and will be incorporated into Air Quality Permit 080073. The applicable Permit Conditions are enclosed with this letter.

If you need assistance with the permit, please contact the Small Business Assistance Coordinator office at 602.506.5102 or contact the undersigned at 602.506.7248. Email communications may be sent to AQPermits@mail.maricopa.gov.

MARICOPA COUNTY AIR QUALITY DEPARTMENT

Engineering and Permitting Division

1001 N. Central Avenue, Suite 400, Phoenix, Arizona 85004
Phone: (602) 506-6010 Fax: (602) 506-6985

AIR QUALITY PERMIT TO OPERATE AND/OR CONSTRUCT

(As required by Title 49, Chapter 3, Article 2, Section 49-480, Arizona Revised Statutes)

ISSUED TO

Arizona Solar One, LLC.
NW Corner of Painted Rock Dam Road & I-8
Maricopa County, AZ

This air quality permit to operate and/or construct does not relieve the applicant of the responsibility of meeting all air pollution regulations.

THE PERMITTEE IS SUBJECT TO THE SPECIFIC AND GENERAL CONDITIONS IDENTIFIED IN THIS PERMIT.

PERMIT NUMBER: 080073 **REVISION DATE:** Xx/xx/xxxx

REVISION NUMBER: 1.1.0.0 **EXPIRATION DATE:** 06/30/2020

Todd Martin, Non-Title V Permit Supervisor

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Any cited regulatory paragraphs or section numbers refer to the version of the rules and regulations that were in effect on the first date of public notice of the applicable Permit Condition unless specified otherwise. However, in the event the rules and regulations are amended during the term of this Permit, the amended rules and regulations shall apply to this Permit. Whenever the term, Control Officer, is used in this Permit it shall be interpreted to mean, Control Officer or designated representative. Where the term "Rule" appears, it shall be construed to mean "Maricopa County Air Pollution Control Regulations" unless otherwise noted.

SPECIFIC CONDITIONS

Heat Transfer Fluid (HTF) and Thermal Energy Storage (TES) Systems:

1. Allowable Emissions:

The Permittee shall not allow emissions into the atmosphere to exceed any of the following limits:

Pollutant	12-Month Rolling Total Emission Limits
Total Volatile Organic Compounds (VOCs)	38.01 tons
Total Hazardous Air Pollutants (HAPs)	18.91 tons
Any Single HAP	8.25 tons

The 12-month rolling total emissions shall be calculated monthly within 30 days following the end of each calendar month by summing the emissions over the most recent 12 calendar months. Monthly emissions from the Heat Transfer Fluid shall be calculated as the sum of (Emissions of HTF Fluid from Leaks as calculated in the most recent permit application) + (HTF Emission rate from the carbon adsorption system as determined through performance testing). The Permittee shall keep this emission report on-site for inspection or submittal upon request.

[Rule 220, §302.2][Locally enforceable only]

NOx emissions from the Thermal Energy Storage (TES) System shall not exceed:

Emission Limit [(1)]	12-Month Rolling Total Emission Limit
Nitrogen Dioxides (NOx)	18.25 tons

[(1)] Monthly Emissions from the Thermal Energy Storage (TES) System shall be calculated by multiplying the average hourly NOx emissions determined through the most recent performance testing by the hours of venting that occurs per month on the salt storage tank.

[Rule 220, §302.2] [Locally enforceable only]

2. Material Limitation:

The Permittee shall use a heat transfer fluid consisting of either:

a. Therminol VP-1; or

b. DowTherm A; or

c. Equivalent

The Permittee shall ensure that any heat transfer fluid consist of 73.0-73.5% Diphenyl Ether and 26.5-27.0% Biphenyl. Compliance with this permit condition shall be met by keeping an up-to-date Manufacturers Data sheet of the chosen HTF on site at all times.

[Rule 220 §302.2] [Locally enforceable only]

3. Operation Limitations:

Non-Complying Solvents (HTF): No person shall discharge more than 40 pounds (18 kg) of volatile organic compounds into the atmosphere in any one day from any machine, equipment, device or other article for employing, applying, evaporating or drying any non-complying solvent (as defined in Section 202 of MCAQD Rule 330) or material containing such non-complying solvent, unless the entire amount of such discharge has been reduced in accordance with Permit Condition 4 of this permit.

[Rule 330 § 302] [Locally enforceable only]

4. Control Requirements for the HTF Ullage (Overflow and Expansion Tanks) System:
Emissions to the atmosphere of volatile organic compounds shall be reduced by the following:

a. The Permittee shall at least operate the HTF ullage system as follows:

i. HTF ullage gases vented from the expansion vessels shall be vented and cooled to the heat exchangers (coolers) then sent to the condensate receiver vessel. Vapors from the condensate receiver vessel shall then be sent to a packed scrubber (HTF Vent Scrubber) and finally through one of the carbon beds in a carbon adsorption system consisting of two carbon beds arranged in parallel

ii. HTF ullage gases vented from the overflow tanks shall be sent to the overflow cooler, then sent to a packed scrubber (Overflow Tank HTF Scrubber) and finally through one of the carbon beds in another carbon adsorption system also consisting of two carbon beds arranged in parallel.

1) The overflow cooler shall be equipped with an appropriate subgrade tank where liquids from the cooler are collected for separation.

iii. Additional control devices may be used in the overall Ullage system, as long as the carbon adsorption system meets the standards outlined in Permit Condition 4.b below

b. The Carbon Adsorption System shall achieve at least a 95% VOC removal efficiency or a VOC outlet concentration of less than 10 ppmv as hexane or its equivalent as methane as applicable, as demonstrated through performance testing.

c. The Permittee shall monitor for breakthrough at the outlet of the carbon bed system while the carbon bed system is in use at least once an operating day, using an organic vapor analyzer (OVA) or other monitoring device as approved by the Control Officer. Breakthrough shall be defined when the OVA or other approved monitoring device shows a VOC concentration of 110 ppmv or greater, measured as hexane or its equivalent as methane as applicable at the outlet of the system.

d. Whenever breakthrough is determined in one carbon adsorption system, the ullage gases shall be routed to the parallel carbon bed within 24 hours of the occurrence of breakthrough. Prior to switching back to the first carbon bed, the Permittee shall replace it with fresh granular activated carbon.

e. The Permittee shall specify in the Ullage system O&M Plan, the maximum VOC inlet concentration to the system and maximum flow rate as specified by the manufacturer.

[Rule 330 § 304.1 – 304.5] [County Rule 220 §302.2] [Rule 241 §302]
[Locally enforceable only]

5. Control Requirements for the Thermal Energy Storage (TES) System:
Emissions to the atmosphere from the TES Storage Tanks shall be controlled as follows:

a. The TES storage tanks shall be closed at all times except during maintenance, inspection, monitoring, repair or replacement.

b. The TES tanks shall all be equipped with condensate tanks that capture all HTF vapor.

c. The condensate tanks attached to the TES storage tanks shall be kept closed at all times unless emptying any HTF liquid or water collected, or during monitoring/inspection activities.

d. The Permittee shall limit the total amount of time the six sets of TES System salt tanks are vented to no more than 17,520 venting-hours per any 12 consecutive month periods. The Permittee shall add the venting-hours from each set of tanks on a monthly basis to ensure they do not exceed this limit.

e. The Permittee shall increase the size of the vent lines between the TES hot and cold storage tanks to allow adequate pressure increase that would not cause the pressure service valves (PSVs) to release vapors into the atmosphere. This piping replacement shall occur no later than 180 days after this permit issuance (1.1.0.0) for TES tanks currently in operation or prior to start of TES tanks not in operation as of the date of this permit issuance.

[County Rule 220 §302.2] [Rule 241 §302] [Locally enforceable only]

6. Operation and Maintenance (O & M) Plan Requirements:

a. Unless an Operation and Maintenance (O&M) Plan has previously been submitted and approved, the Permittee shall submit an approvable O&M Plan for the following devices to MCAQD at 1001 N. Central Ave., Phoenix, AZ 85004, Attn: Permitting Manager, within 45 days of the initial issuance of this permit, or within 45 days of the equipment receiving exhaust, in accordance with the Department guidelines. The Permittee shall revise the O&M plan on an as-needed basis or at the direction of the Control Officer. The Permittee may implement the changes addressed in the revised O&M plan after it submits the revision to the Department. Unless disapproved in writing by the Department, the Permittee shall continue to operate in accordance with the revised O&M plan

b. The following devices are subject to an O&M Plan:

Ullage System O&M Plan:

Expansion Vessel Heat Exchangers (Coolers)

Overflow Cooler

HTF Expansion Scrubber

Overflow Tank Scrubber

Carbon Adsorption System

TES Vent Line/Condensate System O&M plan:

TES Vent Line/Condensate System

c. The Operation and Maintenance (O&M) Plan shall specify key system operating parameters as specified by the manufactures, such as temperatures, pressures and/or flow rates, necessary to determine compliance and describe in detail procedures to maintain the approved emission control system. The Permittee shall monitor, operate and maintain the equipment in accordance with the device's approved O&M Plan. At a minimum the plan shall include:

i. Carbon Adsorption System: Detailed procedure to determine developed monitoring, maintenance and detection procedures as specified by the manufacturer. The O&M Plan shall also include the maximum VOC inlet concentration to the system and maximum flow rate (as specified by the manufacturer) and dates of carbon replacement.

ii. Overflow Cooler and Expansion Vessel Heat Exchangers (coolers): Outlet Temperature.

iii. TES Tank System: Parameters monitored to ensure VOC emissions are not vented directly to the atmosphere. Any corrective action plans performed for high readings of VOC/HTF presence.

d. If any control device is found to be operating outside a specified range, the Permittee shall take corrective action in a timely manner to bring the device back into the specified operating range or shut down the device and the associated equipment vented to it.

e. If a pattern of excursions, as determined by the Department or the Permittee, of operation outside the specified operating range develops, the Permittee shall submit for Department approval a Corrective Action Plan to bring the devices back into the specified operating range. The Plan shall be submitted to the Department, Attn: Compliance Manager, within 30 days of the determination of the existence of excursions.

[Rule 220 § 302.4] [Locally enforceable only]

7. VOC Containment and Disposal:

No person shall store, discard, or dispose of VOC or VOC-containing material in a way intended to cause or to allow the evaporation of VOC to the atmosphere. Reasonable measures shall be taken to prevent such evaporation which include but are not limited to the following:

a. All materials from which VOC can evaporate, including HTF, fresh solvent, waste solvent and solvent-

soaked rags and residues, and spent carbon removed from the carbon adsorption system shall be stored in closed containers when not in use; and

b. Such containers one gallon and larger shall be legibly labeled with their contents.

[Rule 330 §§§ 306.1 – 306.3] [Locally enforceable only]

8. Testing Requirements :

a. Performance Testing Requirements: The Permittee shall conduct performance tests on the following equipment as specified.

[County Rule 270 §401][SIP Rule 27 §A][40 CFR §60.8(a)]

i. Carbon Adsorption System – Unless previously tested, testing shall occur within 60 days after permit issuance date (Rev: 1.1.0.0) or within 60 days after new applicable equipment has achieved the capability to operate at its maximum production rate on a sustained basis, whichever occurs last. The testing deadline may be extended by the Control Officer for good cause, but in no case shall the testing deadline, including test report submittal, extend beyond 180 days after the applicable date:

1) The Permittee shall measure the VOC concentration in the carbon adsorption system inlet and exhaust streams to demonstrate a minimum VOC destruction efficiency of 95% by weight or just the outlet to demonstrate an outlet concentration of no more than 10 ppmv VOCs as hexane or its equivalent as methane.

b. Emissions Characterization Requirements: The Permittee shall conduct an emission characterization on the following equipment as specified:

i. Ball Joint leak information – Testing shall occur within 60 days after this permit issuance date (1.1.0.0). The testing deadline may be extended by the Control Officer for good cause, but in no case shall the testing deadline, including test report submittal, extend beyond 180 days after the applicable date:

1) The Permittee shall conduct a minimum of three tests for each type of ball joint identified below for HAP and VOC emissions, selected in the test protocol for approval by the Department.

The ball joints shall consist of "low" or Grade 3 leaks, "medium" or Grade 2 leaks and "non-visible" or Grade 4 leaks (as defined in the LDAR).

2) The Permittee may choose to use the highest result of the 3 tests as representative of emissions.

a) If the Permittee does not wish to use the highest test result, then they may conduct further tests until a statistically valid result is achieved and use the average of all tests. Statistically valid shall be defined as a coefficient of variation < 25%.

b) The coefficient of variation shall be calculated for the data from the tests:

The coefficient of variation (c_v) = (standard deviation) / (mean)

$$c_v = \frac{\sigma}{\mu}$$

c) If the coefficient of variation is > 25%, additional tests shall be performed until the coefficient of variation falls below 25%.

c. Subsequent tests and emission characterizations shall be conducted as specified below:

i. Carbon Adsorption System - within 58 to 62 months of the previous test.

ii. Ball Join Leak Emissions – The Permittee may conduct additional testing to determine emission factors for each type of ball joint identified in the LDAR, as long as appropriate notifications and

test methods are followed and tests are representative of normal operation. The Department reserves the right to ask for repeat testing if the emission results of the first characterization are insufficient for the purposes of monitoring emissions.

[County Rule 200 §310]

d. Testing Criteria: Performance tests shall be conducted and data reduced in accordance with the test methods and procedures specified in the Test Methods section of this permit condition unless otherwise specified by the Control Officer and/or Administrator. The Control Officer and/or Administrator may specify or approve minor changes in methodology to a reference method, approve the use of an equivalent test method, approve the use of an alternative method that has been determined to be acceptable for demonstrating compliance, or waives the requirement for performance tests because the Permittee has demonstrated by other means that the source is in compliance with the standard. For NSPS facilities, only EPA has the authority to waive initial testing requirements.

[County Rule 270 §402][SIP Rule 27 §B][40 CFR §60.8(b)]

e. Test Methods: Sampling sites and velocity traverse points shall be selected in accordance with EPA Test Method 1or 1A. The gas volumetric flow rate shall be measured in accordance with EPA Test Method 2, 2A, 2C, 2D, 2F, 2G or 19. The dry molecular weight shall be determined in accordance with EPA Test Method 3, 3A or 3B. The stack gas moisture shall be determined in accordance with EPA Test Method 4. These methods must be performed, as applicable, during each test run.

[County Rule 270 §301.1][SIP Rule 27 §B]

i. Carbon Adsorption System:

1) VOC testing shall be conducted in accordance with EPA Test Method 25 or 25A. Testing to quantify exempt compounds, such as methane, shall be conducted in accordance with EPA Test Method 18.

ii. Ball Joint Leak Emissions:

1) Testing shall include a methodology that allows for characterization of the emissions and measure of the flow rate.

2) If any liquids are noted during the test, they shall be measured either by volume or mass.

iii. TES System:

1) NOX testing shall be conducted in accordance with EPA Test Method 7E.

f. Operating Conditions: Performance tests shall be conducted under representative operating conditions and all equipment shall be operated during testing in accordance with the most recently approved O&M Plan. The Permittee shall make available to the Control Officer any records necessary to determine appropriate conditions for performance tests. Operations during periods of startup, shutdown, and equipment malfunction shall not constitute representative conditions for performance tests unless otherwise specified in the applicable standard or permit conditions.

[County Rule 270 §403][SIP Rule 27 §B][40 CFR §60.8(c)]

g. Monitoring Requirements: The Permittee shall record all process and control equipment information that are necessary to document operating conditions during the test and explain why the conditions represent normal operation. Operational parameters shall be monitored and recorded at least once every 30 minutes during each of the required test runs and documented in the test report. The operational parameters monitored shall be capable of indicating that the equipment is operating within the permitted limits, both during and after the performance tests.

[County Rule 270 §301.1][SIP Rule 27 §B]

h. Test Protocol Submittal: The Permittee shall submit a separate test protocol for each performance test to the Department for review and approval at least 30 days prior to each performance test. The test protocol shall be prepared in accordance with the most recent version of the Department's "Air Quality Performance Test Guidelines for Compliance Determination in Maricopa County". A completed copy of the Department's "Test Protocol Submittal Form" shall accompany each test protocol.

[County Rule 270 §301.1][SIP Rule 27 §B]

i. Notice of Testing: The Permittee shall notify the Department in writing at least two weeks in advance of the actual date and time of each performance test so that the Department may have a representative attend.

[County Rule 270 §404][40 CFR §60.8(d)]

j. Testing Facilities Required: The Permittee shall install any and all sample ports or platforms necessary to conduct the performance tests, provide safe access to any platforms and provide the necessary utilities for testing equipment.

[County Rule 270 §405][SIP Rule 42][40 CFR §60.8(e)]

k. Minimum Testing Requirements: Each performance test shall consist of three separate test runs with each test run being at least one hour in duration unless otherwise specified in the applicable standard or in this permit. The same test methods shall be conducted for both the inlet and outlet measurements, if applicable, or justification for any necessary exceptions shall be provided in the test protocol. Emissions rates, concentrations, grain loadings, and/or efficiencies shall be determined as the arithmetic average of the values determined for each individual test run. Performance tests may only be stopped for good cause, which includes forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of a performance test without good cause after the first test run has commenced shall constitute a failure of the performance test.

[County Rule 270 §406][40 CFR §60.8(f)]

l. Test Report Submittal: The Permittee shall complete and submit a separate test report for each performance test to the Department within 30 days after the completion of testing. The test report shall be prepared in accordance with the most recent version of the Department's "Air Quality Performance Test Guidelines for Compliance Determination in Maricopa County". A completed copy of the Department's Test Report Submittal Form shall accompany each test report.

[County Rule 270 §301.1][SIP Rule 27 §B]

m. Compliance with Emission Limits: Compliance with allowable emission limits and standards shall be determined by the performance tests specified in this permit. If test results do not demonstrate compliance with the requirements of these permit conditions, the Permittee shall make the necessary repairs and/or adjustments to the equipment and demonstrate compliance through retesting. This will not nullify the fact that test results did not demonstrate compliance with the requirements of the permit conditions or nullify any violations that may result from this noncompliance. In addition to compliance demonstrations, test results shall be used for annual emissions inventory purposes, if the Permittee is required to complete an emissions inventory survey.

[County Rule 270 §407]

n. Correspondence: All test extension requests, test protocols, test date notifications, and test reports required by this permit shall be submitted to the Department and addressed to the attention of the Performance Test Evaluation Supervisor.

[County Rule 270 §301.1][SIP Rule 27 §B]

o. Authority: The above testing requirements represent the minimum level of testing to monitor for compliance with the emission limits in this permit. Nothing in this section shall prevent the Control Officer from requiring additional performance testing as deemed necessary to ensure permit compliance and protection of the public health and welfare.

[County Rule 200 §309][County Rule 270 §402.5]

9. Monitoring:

a. The Permittee shall develop and implement a comprehensive leak detection and repair plan (LDAR). The LDAR shall include a plan to determine, repair, or replace and report leaks in the HTF piping network. Unless previously submitted, The LDAR shall be submitted to the Control Officer for approval no later than 45 days from the issuance of this permit modification (2.0.1.0). The LDAR at a minimum shall include the following:

i. Equipment Identification Process– Total number of; valves, pump connectors, pressure relief valves and/or U/L joints.

ii. How leaks, ruptures or spills are classified and identified.

iii. A general procedure for inspecting all valves, pump connectors, ball joints, pressure relief values and any U/L joints at least once every operating day. The Permittee shall include a description for both the power block and the solar field inspections in the LDAR.

iv. A procedure for % leaking survery data for all valves, pump connectors, ball joints, pressure relief valves and any U/L joints at least twice a year. The Permittee shall notify the Department in writing at least 30 days in advance before performing this semiannual inspection to allow the Department to observe any/all days.

v. Leak Repair procedures.

vi. Example Inspection sheets.

[County Rule 220 §302.2][County Rule 241 §302]

b. The Permittee shall monitor VOC emissions from the bio-remediation unit (if in operation) as follows:

i. The Permittee shall measure VOC emissions 3 inches above the soil surface in the bio-remediation unit on a weekly basis using a flame ionization detector (FID) or photo-ionization detector (PID) or other device approved by the control officer.

1) If the soil in the bio-remediation unit results in a VOC reading of more than 50 ppmv calibrated as methane, the bio-remediation soil shall be covered with a minimum of 10-mil plastic sheeting to control VOC emissions or placed in appropriate storage bins that are closed at all times except to add new contaminated soil, take appropriate VOC readings, or soil disposal.

2) The Permittee shall also submit a permit revision to account for emissions from the bio remediation pad.

[County Rule 220 §302.2][County Rule 241 §302]

10. Record Keeping:

Records shall be retained for five years and shall be made available to the Control Officer upon request.

a. The Permittee shall maintain the results of emission calculations to demonstrate compliance with the daily and 12-month rolling limits of Permit Conditions 1.

b. The Permittee shall maintain daily records of venting-hours that occur for each set of TES Salt Tanks.

c. The Permittee shall maintain the following records, and shall updated them monthly by the end of the following month:

i. Records of the amount of HTF fluid added to the system.

ii. Record the weight of the empty tanks used to dispose of HTF.

iii. Records of the volume of all HTF and HTF contaminated liquids shipped off site for disposal.

iv. Records of the weight of all HTF and HTF contaminated liquids shipped off site for disposal.

v. Records of the analysis reports for the spent activated carbon removed at every change out to determine weight of HTF contained in the carbon.

vi. For mixtures of water and HTF, the Permittee shall calculate the weight of HTF shipped off site as:

$$W_{HTF} = SG_{HTF} \times \left(\frac{W - V \times SG_{H2O}}{SG_{HTF} - SG_{H2O}}\right)$$

Where:

- W_{HTF} = weight of HTF shipped off site

- SG_{HTF} = specific gravity of HTF
- W = total weight of liquid shipped off site
- V = total volume of liquid shipped off site
- SG_{H2O} = specific gravity of water

vii. If the contaminated liquids contain anything other than HTF and water the nature and percentage of those contaminants shall be recorded.

viii. If HTF is spilled on the ground, the Permittee shall record the amount of HTF spilled for purposes of the mass balance and HTF sent off site.

d. Monitoring and maintenance records specified in the O&M Plan:

i. Monitoring Records shall consist of an operations log sheet to be completed for every day the process and/or control device is in operation. Operations log sheets shall, at a minimum, contain the following information: equipment identification; date and time of readings; identification of the individual recording the data; operating parameters to be monitored including units of measure, operating limits (upper and lower limits), and locations for recording measurements; measurement frequency; and if applicable, corrective action taken. Account for any periods of operation when the control device was not operating.

ii. Maintenance Records shall, at a minimum, contain the following information: equipment identification; date; identification of the individual performing the maintenance check; procedures to be performed including frequency of occurrence; results of inspection (acceptable, nozzle plugged, belt cracked, etc.); and corrective action taken (none, cleaned nozzle, replaced belt, etc.).

e. Whenever the O&M Plan requires that maintenance be performed, a record shall be made of the maintenance actions taken within 24 hours of maintenance completion.

f. An explanation shall be recorded for any scheduled maintenance that is not performed during the period designated in the O&M Plan.

g. Test reports documenting results of all performance tests;

h. All measurements as may be necessary to determine the conditions of performance tests.

i. Records of VOC monitoring at the TES vent lint/condensate system:

i. Date and time the monitoring was performed with the analyzer for VOC concentration.

ii. All results of the monitoring taken as VOC concentration in ppmv, measured as methane.

iii. Corrective action taken as a result of VOC concentration exceeding any standard in this permit.

iv. Calibration records on the analyzer(s) in accordance with the manufacturer's specifications and recommendations.

j. The Permittee shall maintain written records of weekly VOC readings from the bio-remediation unit during periods when the unit is in operation. The written records will be used to verify compliance with all required monitoring of the bio-remediation unit in this permit.

[Rule 220 § 302.7][Rule 330 §§§ 503.1 – 503.3] [Locally enforceable only]

11. Reporting

a. The Permittee shall submit a Mass Balance report to MCAQD (Attention: Compliance Manager) every 6 months. The report shall contain all the information required in Permit Condition 10.c.

The reporting periods are as follows:

i. Report 1: January 1 through June 30

ii. Report 2: July 1 through December 31

The reports shall be due 45 days following the end of each reporting period. In the event that this permit is issued in the middle of a reporting period, the Permittee shall submit a partial report for any

months covered within the time frame listed above.

[County Rule 220 §302.8] [Locally enforceable only]

b. HTF contamination reporting:
The Permittee shall report all of the following events (if applicable):

i. HTF is detected in the cooling tower water

ii. If water accumulation in the Ullage system causes the carbon beds to become inoperable.

iii. Any equipment is added to the site.

The Report shall be submitted to the Control Officer, Attn: Compliance Division Manager, within 2 days after the date on which the plant shut down.

[County Rule 220 §§302.8] [Locally enforceable only]

Boilers/Heaters:
NGBoiler = 100 MMbtu/hr Natural Gas fired Boiler

12. Allowable Emissions:

The Permittee shall not allow emissions into the atmosphere in excess of any of the following:

	Twelve Month Rolling Total Emission Limits
Carbon Monoxide (CO)	17.95 tons
Nitrogen Oxide (NOx)	9.2 tons
Sulfur Oxides (SOx)	1 ton
Particulate Matter <10 Micron Diam. (PM_{10})	1.67 tons
Particulate Matter <2.5 Micron Diam. ($PM_{2.5}$)	1.67 tons
Volatile Organic Compounds (VOC)	2.39 tons

The 12-month rolling total emissions shall be calculated monthly within 30 days following the end of each calendar month by summing the emissions over the most recent 12 calendar months. The Permittee shall keep this emission report on-site for inspection or submittal upon request

[Rule 220 §302.2] [Rule 241 §§301, 302] [Locally Enforceable Only]

13. Opacity:
The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity from theNG Boiler..

[SIP Rule 323 §302][Rule 300 §301]

14. Operational Limitations:

a. NGBoiler

i. The Permittee may only use natural gas and/or Propane as fuels for the NGBoiler.

ii. Annual Emissions of NOx from the NGBoiler may not exceed 18,400 lbs/year.

The Data Control System(DCS) shall be used to verify compliance with this permit condition.

iii. The Permittee may only operate the NGBoiler for a period of no more than 500 hours per any 12 consecutive month periods and no more than 8,760 hours for the lifetime of this permit.

[Rule 220 §302.2] [Rule 241 §§301, 302] [Locally Enforceable Only]

15. Limitations – Nitrogen Oxides:

The Permittee shall limit nitrogen oxide emissions to no more than the following amounts as demonstrated through a performance test required by Permit Condition 16:

a. 35 ppmvd NOx @ 3% Oxygen(O2) ppm. During steady state operations, this test result using EPA Reference Method(s) 7 shall be based upon the arithmetic mean of the results of three test runs. Each test run shall have a minimum sample run time of one hour.

This ppmvd concentration limit shall not apply during periods of startup, shutdown, and malfunction.
[SIP Rule 323 §304.1.a][Rule 241 §301]

b. The Permittee shall tune the NGBoiler every 6 months with good combustion practices. The Permittee shall use manufacturer's procedures that at a minimum include the following:

i. Inspect the burner system and clean and replace any components of the burner as necessary to minimize emissions of NO_x and CO; and

ii. Inspect the burner chamber for areas of impingement and remove if necessary; and

iii. Inspect the flame pattern and make adjustments as necessary to optimize the flame pattern; and

iv. Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly; and

v. Measure the NO_x and the CO concentration of the effluent stream after each adjustment is made with a handheld portable monitor to ensure optimal baseline concentrations are maintained.
[SIP Rule 323 §304.1.a][Rule 323 §304.1]

16. Performance Test:

a. Testing Requirements: Unless previously tested, The Permittee shall conduct performance tests on the following equipment within 60 days after the permit issuance date or within 60 days after the new applicable equipment has achieved the capability to operate at its maximum production rate on a sustained basis, whichever occurs last. The testing deadline may be extended by the Control Officer for good cause, but in no case shall the testing deadline, including test report submittal, extend beyond 180 days after the permit issuance date or 180 days after the new applicable equipment has achieved the capability to operate at its maximum capacity, whichever occurs last. Failure to test within the time frame specified by this condition shall result in a continuing violation for each day beyond the deadline until the required performance test has occurred.

i. 100 MMbtu/hr Rental Boiler/Heater (NGBoiler).
[County Rule 200 §309][County Rule 270 §401][SIP Rule 27 §A]

b. Testing shall measure the concentrations of NO_X and CO in the boiler exhaust stream. Testing shall demonstrate compliance with all applicable NO_X and CO concentrations and/or emission rate requirements of these permit conditions. NO_X and CO test results shall be corrected to 3% O2.

i. The Permittee shall record the steam temperature, steam pressure and percent fire during the performance test as applicable.
[County Rule 200 §309] [Arizona Testing Manual for Air Pollutant Emissions] [Rule 323 §504]

c. Following the initial performance test for this permit, the Permittee shall conduct performance tests every 5 years if the Permittee plans to continue using the furnaces and boiler/heater beyond the projected total hours of 5760 and 8760 hours, respectively. (Within 58 to 62 months of the previous test).

d. Testing Criteria: Performance tests shall be conducted and data reduced in accordance with the test methods and procedures specified in the Test Methods section of this permit condition unless otherwise specified by the Control Officer and/or Administrator. The Control Officer and/or Administrator may specify or approve minor changes in methodology to a reference method, approve the use of an equivalent test method, approve the use of an alternative method that has been determined to be acceptable for demonstrating compliance, or waive the requirement for performance tests because the Permittee has demonstrated by other means that the source is in compliance with the standard. For NSPS

facilities, only EPA has the authority to waive initial testing requirements.

[County Rule 270 §402][SIP Rule 27 §B]

e. Test Methods: Sampling sites and velocity traverse points shall be selected in accordance with EPA Test Method 1or 1A. The gas volumetric flow rate shall be measured in accordance with EPA Test Method 2, 2A, 2C, 2D, 2F, 2G or 19. The dry molecular weight shall be determined in accordance with EPA Test Method 3, 3A or 3B. The stack gas moisture shall be determined in accordance with EPA Test Method 4. These methods must be performed, as applicable, during each test run.

[County Rule 270 §301.1][SIP Rule 27 §B]

f. Operating Conditions: Performance tests shall be conducted under representative operating conditions and all equipment shall be operated during testing in accordance with the most recently approved O&M Plan or according to its operations manual if no O&M Plan is required. The Permittee shall make available to the Control Officer any records necessary to determine appropriate conditions for performance tests. Operations during periods of startup, shutdown, and equipment malfunction shall not constitute representative conditions for performance tests unless otherwise specified in the applicable standard or permit conditions.

[County Rule 270 §403]

g. Monitoring Requirements: The Permittee shall record all process and control equipment information that are necessary to document operating conditions during the test and explain why the conditions represent normal operation. Operational parameters shall be monitored and recorded at least once every 30 minutes during each of the required test runs and documented in the test report. The operational parameters monitored shall be capable of indicating that the equipment is operating within the permitted limits, both during and after the performance tests.

[County Rule 270 §301.1][SIP Rule 27 §B]

h. Test Protocol Submittal: The Permittee shall submit a separate test protocol for each performance test to the Department for review and approval at least 30 days prior to each performance test unless otherwise specified in the applicable standard or in this permit. The test protocol shall be prepared in accordance with the most recent version of the Department's "Air Quality Performance Test Guidelines for Compliance Determination in Maricopa County." A completed copy of the Department's "Test Protocol Submittal Form" shall accompany each test protocol.

[County Rule 270 §301.1][SIP Rule 27 §B]

i. Notice of Testing: The Permittee shall notify the Department (Attn: Compliance Manager) in writing at least two weeks in advance of the actual date and time of each performance test unless otherwise specified in the applicable standard or in this permit so that the Department may have a representative attend.

[County Rule 270 §404]

j. Testing Facilities Required: The Permittee shall install any and all sample ports or platforms necessary to conduct the performance tests, provide safe access to any platforms, and provide the necessary utilities for testing equipment.

[County Rule 270 §405][SIP Rule 42]

k. Minimum Testing Requirements: Each performance test shall consist of three separate test runs with each test run being at least one hour in duration unless otherwise specified in the applicable standard or in this permit. The same test methods shall be used simultaneously for both the inlet and outlet measurements, if applicable, or justification for any necessary exceptions shall be provided in the test protocol. Emissions rates, concentrations, grain loadings, and/or efficiencies shall be determined as the arithmetic average of the values determined for each individual test run. Performance tests may only be stopped for good cause, which includes forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of a performance test without good cause after the first test run has commenced shall constitute a failure of the performance test.

[County Rule 270 §406]

l. Test Report Submittal: The Permittee shall complete and submit a separate test report for each performance test to the Department within 30 days after the completion of testing unless otherwise specified in the applicable standard or in this permit. The test report shall be prepared in accordance with the most recent version of the Department's "Air Quality Performance Test Guidelines for Compliance Determination in Maricopa County." A completed copy of the Department's "Test Report Submittal Form" shall accompany each test report.

[County Rule 270 §301.1][SIP Rule 27 §B]

m. Compliance with Emission Limits: Compliance with allowable emission limits and standards shall be determined by the performance tests specified in this permit. If test results do not demonstrate compliance with the requirements of these permit conditions, the Permittee shall make the necessary repairs and/or adjustments to the equipment and demonstrate compliance through retesting. This will not nullify the fact that test results did not demonstrate compliance with the requirements of the permit conditions or nullify any violations that may result from this noncompliance. In addition to compliance demonstrations, test results shall be used for annual emissions inventory purposes if the Permittee is required to complete an emissions inventory survey.

[County Rule 270 §407]

n. Correspondence: All test extension requests; test protocols, test date notifications, and test reports required by this permit shall be submitted to the Department and addressed to the attention of the Performance Test Evaluation Supervisor.

[County Rule 270 §301.1][SIP Rule 27 §B]

o. Authority: The above testing requirements represent the minimum level of testing to monitor for compliance with the emission limits in this permit. Nothing in this section shall prevent the Control Officer from requiring additional performance testing as deemed necessary to ensure permit compliance and protection of the public health and welfare.

[County Rule 200 §309][County Rule 270 §402.5]

p. NO_X testing shall be conducted in accordance with EPA Test Method 7E. CO testing shall be conducted in accordance with EPA Test Method 10.

[Rule 323 §504]

17. Record Keeping & Reporting:

The Permittee shall comply with the requirements set forth in this permit. Any records and data required by this section shall be kept on site at all times in a consistent and complete manner and be made available without delay to the Control Officer or his designee upon request. Copies of reports, logs and supporting documentation required by the Control Officer shall be retained for at least 5 years. Records and information required by this rule shall also be retained for at least 5 years. Records shall consist of the following information:

a. The Permittee shall record and maintain records of the amount of each fuel combusted in the NGBoiler during each calendar month. A monthly invoice from the fuel supplier or fuel delivery tickets or DCS information may be used to demonstrate compliance with the requirement of this provision.

[Rule 323 §501.1]

b. The Permittee shall maintain records of the number of daily, monthly, and annual operating hours for each piece of equipment which combusts diesel, natural gas, butane and/or propane.

[Rule 200 §309][Rule 323 §501 and §502]]

c. Tuning Procedure for NO_X: Date that the procedure was performed on the particular unit and at a minimum: stack gas temperature, flame conditions, nature of the adjustment and results of the nitrogen oxide and carbon monoxide concentrations obtained by using a handheld monitor after each adjustment.

[Rule 323 §501.4] [Rule 241 §301]

Emergency Generators/Fire Pumps:

18. Allowable Emissions (12 Month Rolling):

The Permittee shall not allow emissions into the atmosphere in excess of any of the following:

Pollutant	Twelve Month Rolling Total Emission Limits
Carbon Monoxide (CO)	7.167 tons
Nitrogen Oxide (NOx)	11.86 tons
Sulfur Oxides (SOx)	1 ton
Particulate Matter <10 Micron Diam. (PM_{10})	1 ton
Particulate Matter <2.5 Micron Diam. ($PM_{2.5}$)	1 ton
Volatile Organic Compounds (VOC)	2 tons

The 12-month rolling total emissions shall be calculated monthly within 30 days following the end of each calendar month by summing the emissions over the most recent 12 calendar months. The Permittee shall keep this emission report on-site for inspection or submittal upon request

[Rule 220 §302.2] [Locally Enforceable Only]

19. NSPS Subpart IIII Emissions Limitations/Standards

The owner or operator of an emergency stationary compression ignition (CI) internal combustion engine (ICE) must comply by purchasing an engine certified to the appropriate emission standards specified below:

[40 CFR 60.4211(c)]

a. The Permittee must comply with at least the emission standards specified in 40 CFR 89.112 for the two 4376 hp Caterpillar Emergency Generators model year 2011 through 2014 outlined below:

Emission Standards in g/KW-hr				
NMHC+NOx	**HC**	**NO_X**	**CO**	**PM**
6.4	N/A	N/A	3.5	0.20

b. The Permittee must comply with at least the emission standards specified in Table 4 of 40 CFR Part 60, Subpart IIII, for the 575 hp Emergency Diesel Fire Pump engine, outlined below:

Emission Standards in g/KW-hr				
NMHC + NO_X	**HC**	**NO_X**	**CO**	**PM**
4.0	N/A	N/A	3.5	0.20

[40 CFR 60.4205]

20. Opacity:

The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity.

[SIP Rule 324 §§303, 503.8]

21. Operational Limitations:

a. The Permittee shall limit the operation of the emergency generators/fire pumps as specified below and shall not operate the emergency generator for the purposes of maintenance checks and readiness testing for more than 100 hours per any twelve consecutive months. The daily trigger of Best Available Control Technology (BACT) has been exempted for emergency generators.

i. Combined total for the two 4376 hp diesel fired emergency generators shall not exceed 500 hours per any twelve consecutive month period including the 100 hours listed above.

ii. 575 hp Emergency Diesel Fire pump engine shall not exceed 500 hours per any twelve consecutive months including the 100 hours listed above.

[SIP Rule 324 §§104.5, 205][40 CFR 60.4211(e)]

b. The emergency generator(s) shall not be used for peak shaving. The emergency generator(s) shall only be used for the following purposes:

i. For power when normal power service fails from the serving utility or if onsite electrical transmission or onsite power generation equipment fails;

ii. Emergency pumping of water resulting from a flood, fire, lightning strikes, police action or for any other essential public services which affect the public health and safety;

iii. Sewage overflow mitigation and/or prevention;

iv. Reliability-related activities such as engine readiness, calibration, or maintenance or to prevent the occurrence of an unsafe condition during electrical system maintenance;

v. To operate standby emergency water pumps for fire control that activate when sensors detect low water pressure.

c. Fuel Sulfur Content:

The Permittee may not use any fuel that contains more than 0.05% sulfur by weight, alone or in combination with other fuels. Use of fuel containing more than 0.05% sulfur by weight shall be reported to the Control Officer along with the dates of such usage and supporting documents.

[SIP Rule 324 §301.1][40 CFR §§60.4211(e)]

d. Additional Operational Limitations for Emergency Generators Manufactured After 4/1/06 and Fire Pumps Manufactured After 7/1/06.

i. The Permittee shall operate and maintain the engine according to the manufacturer's written instructions, or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine.

[40 CFR 60.4211(a)][40 CFR 60.4206]

ii. The Permittee shall only change those engine settings that are permitted by the manufacturer.

[40 CFR 60.4211(a)]

iii. The Permittee shall meet the requirements of 40 CFR parts 89, 94, or 1068, as they apply.

[40 CFR 60.4211(a)]

iv. Fuel Sulfur Content:

After October 1, 2007, The Permittee shall use diesel fuel that meets the following requirements of 40 CFR 80.510(a):

1) Sulfur content: 500 parts per million (ppm) maximum; and

2) A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

[40 CFR 60.4207(a)]

3) After October 1, 2010, The Permittee shall use diesel fuel that meets the following requirements of 40 CFR 80.510(b):

a) Sulfur content: 15 ppm maximum; and

b) A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

[40 CFR 60.4207(b)]

22. Monitoring:

The Permittee shall install a non-resettable hour meter prior to startup of the engine(s). The Permittee shall not operate the engine(s) unless the cumulative run time meter is installed and working properly.

[Rule 220 §302.4] [40 CFR §§60.4209]

23. Record Keeping:

The Permittee shall maintain the following records for a period of at least five years from the date of the records and make them available to the Control Officer upon request:

a. An initial one time entry listing the particular engine combustion type (compression or spark-ignition or rich or lean burn); manufacturer; model designation, rated brake horsepower, serial number and where the engine is located on the site.

[SIP Rule 324 §502.1][Rule 220 §302.7]

b. An annual engine record that includes hours of operation and an explanation for use.

[Rule 324 §502.4][Rule 220 §302.7]

c. The Permittee shall maintain monthly records of engine operation. The records shall include the purpose of operation and the duration of time the engine was operated. The record shall identify whenever the operation of the engine was for emergency purposes.

[40 CFR 60.4211(e)][Rule 220 302.5]

d. The Permittee shall maintain a copy of engine manufacturer data indicating compliance with the standards in this Permit for each compression ignition engine, and shall make the documentation available to MCAQD upon request.

[Rule 220 302.7][40 CFR 60.4211(b)(3)]

e. For compression ignition fire pump engines, the Permittee shall maintain a copy of engine manufacturer data indicating compliance with the standards in this Permit for each compression ignition engine, and shall make the documentation available to MCAQD upon request.

[Rule 220 302.5][40 CFR 60.4211(b)(3)]

f. A copy of the Emergency Generator manufacturer's written instructions, or procedures developed by the Permittee that are approved by the engine manufacturer, shall be kept onsite and made available to MCAQD upon request.

[40 CFR 60.4211(a)][Rule 220 §302.7]

g. If the Control Officer requests proof of the sulfur content of fuel burned in the engines, the Permittee shall submit fuel receipts, contract specifications, pipeline meter tickets, Material Safety Data Sheets (MSDS), fuel supplier information or purchase records, if applicable, from the fuel supplier, indicating the sulfur content of the fuel oil. In lieu of these, testing of the fuel oil for sulfur content to meet the applicable sulfur limit shall be permitted if so desired by the owner or operator for evidence of compliance.

[Rule 220 §302.13, Rule 324 §501.4]

24. Emergency Provisions:

The Permittee shall comply with all record keeping and reporting requirements of Rule 130 (Emergency Provisions) and Rule 140 (Excess Emissions) if the annual allowable hours of operation are exceeded.

[Rule 130; Rule 140]

25. Requirements for Owners and Operators:

a. After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

b. After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

c. The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[40 CFR 60.4208(a) and (b)]

Cooling Tower Operations:

26. Allowable Emissions:

The Permittee shall not allow emissions into the atmosphere in excess of any of the following:

	Twelve Month Rolling Total Emission Limits
Particulate Matter <10 Micron Diam. (PM_{10})	27.81 tons
Particulate Matter <2.5 Micron Diam. ($PM_{2.5}$)	27.81 tons

[Rule 220 §302.2][Locally enforceable only]

27. Opacity:

a. No person shall discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity for a period aggregating more than three minutes in any 60-minute period.

[SIP Rule 300 §301]

b. If visible emissions (excluding water vapor) exceed the above opacity standards, the Permittee shall shut down the applicable equipment and institute repairs or changes necessary to ensure compliance prior to resuming operations.

[Rule 220 §302.2] [Locally enforceable only]

28. Operating Limitations:

a. The Permittee shall limit the total dissolved solids (TDS) concentration of the circulating water of each cooling tower unit to 20,000 ppm. The Permittee may calculate this value as a rolling average for the month based on the weekly TDS sampling described below.

[Rule 220, §302.2]

b. The flow of circulating water through the cooling towers at Arizona Solar One plant shall not exceed 94,608 MMgallons per any 12 consecutive month periods. [Rule 220, §302.2]

c. All cooling towers at the Arizona Solar One Plant shall have a maximum drift rate of no more than 0.0005%. This efficiency shall be achieved through the use of Drift eliminators installed in the cooling towers and written documentation from the manufacturer of the drift eliminators affirming this specified efficiency shall be provided by the Permittee.

[Rule 241, §301]

d. The Permittee shall not allow exhaust from the cooling towers to bypass the drift eliminators.

[Rule 220, §§302.2, 302.7]

29. Monitoring & Record Keeping:

The Permittee shall conduct the following monitoring and shall retain records on-site for a period of no less than 5 years from the date of such record.

a. Total flow rate of circulating water within all cooling towers per day.

b. Total Dissolved Solids Concentration (TDS):

i. On a weekly basis, when the towers are in operation, the Permittee shall measure and record the TDS concentration in the circulating water of each unit cooling tower system (only one sample is required for each unit cooling tower system.). If the towers are not in operation on the scheduled

day for sampling, the Permittee shall obtain a sample on the next day the cooling tower is operating.

ii. On a monthly basis, the Permittee shall calculate and record an arithmetic average of the weekly samples collected in the calendar month.

c. On a weekly basis, when the cooling towers are in operation, the Permittee shall monitor the circulating water for HTF contamination. If HTF is detected in amounts greater than 10 ppm, the Permittee shall submit a modification to account for unabated HTF emissions from the cooling tower operations.

The Permittee shall keep records of all sampling conducted on site.

[Rule 220 §302.5][Rule 241 §302][Locally enforceable only]

d. Emissions Calculations:

i. On a monthly basis within 30 days following the end of each calendar month, the Permittee shall calculate and record the12-month rolling PM10 emissions from each cooling tower unit using the applicable equation specified below:

1) For each unit cooling tower system monthly emissions shall be calculated using the following equation:

$$PM\ 10\ Emissions\ (lbs) = (X) \times Volumetric\ Flow\ Rate\ \left(\frac{gal}{hr}\right) \times Density\ of\ Water\ \left(\frac{lbs}{gal}\right) \times Hour\ sof\ Operations\ \left(\frac{hrs}{yr}\right)$$

Where,

Density of Water = 8.4 lbs/gal
(X) = 1.00 e 10^{-7}
Hours of Operation = Actual hours of operation per year

((X) Is defined below):
*(X) Lbs solid/ lb water = Drift Rate * Total Dissolved Solids*
*(X) Lbs solid/ lb water = (0.0005 lb Drift/100 lb water) * (TDS)*
(X) Lbs solid/ lb water = 1.00 e 10^{-7}

Note: TDS shall be recorded according to part (b) of this permit condition, and shall not exceed 20,000 ppm as specified in this permit.

[Rule 220 §302.5][Locally enforceable only]

e. Written Documentation provided by the vendor/manufacturer of the maximum drift rate and the premise, basis, and justification for the rate.

f. Cooling Tower Inspections:

i. The Permittee shall conduct an inspection of the drift eliminators and water spray distribution systems of the cooling towers every 6 months to ensure proper installation, maintenance, and operation. The Permittee shall maintain a log of the inspections indicating, at a minimum, the following information:

1) Date(s) of inspection;

2) Name of person responsible for overseeing the inspection;

3) Identification of the cooling tower;

4) Condition of the drift eliminators;

5) Condition of the water spray distribution system; and

6) Description of any repairs or maintenance activities conducted.

[Rule 220, §302.5][Locally enforceable only]

ii. The Permittee shall notify the Department in writing at least 2 weeks in advance of the actual time and date of the inspection so that the Department may have a representative attend.

[Rule 220, §302.2][Locally enforceable only]

Fugitive Dust from Dust-Generating Operations

30. Applicability:

a. The provisions of this Section apply to all dust-generating operations except for those dust-generating operations listed in Condition 31 below. Any person engaged in a dust-generating operation subject to this Section shall be subject to the standards and/or requirements of this Section before, after, and while conducting such dust-generating operation, including during weekends, after work hours, and on holidays.

b. For the purpose of Rule 310, any control measure that is implemented must achieve the applicable standard(s) described in Rule 310, as determined by the corresponding test method(s), as applicable, and must achieve other applicable standard(s) set forth in Rule 310.

c. Regardless of whether a dust-generating operation is in compliance with an approved Dust Control Plan or there is no approved Dust Control Plan, the owner and/or operator of a dust-generating operation shall be subject to all requirements of Rule 310 at all times.

d. Failure to comply with the provisions of these requirements, as applicable, and/or of an approved Dust Control Plan, shall constitute a violation.

[SIP Rule 310 §§102, 301]

31. Exemptions:

The provisions of this Section shall not apply to the following activities:

a. Emergency activities that may disturb the soil conducted by any utility or government agency in order to prevent public injury or to restore critical utilities to functional status.

b. Establishing of initial landscapes without the use of mechanized equipment or conducting landscape maintenance without the use of mechanized equipment. However, establishing initial landscapes without the use of mechanized equipment and conducting landscape maintenance without the use of mechanized equipment shall not include grading or trenching performed to establish initial landscapes or to redesign existing landscapes.

[SIP Rule 310 §103]

32. Dust Control Plan Requirements:

a. The owner and/or operator of a dust-generating operation shall submit to the Control Officer a Dust Control Plan with any permit applications that involve dust-generating operations with a disturbed surface area that equals or exceeds 0.10 acre (4,356 square feet) before commencing any routine dust-generating operation. The Dust Control Plan shall be kept available onsite at all times.

b. The Permittee shall comply with the requirements of the Dust Control Plan and the provisions of MCAQD Rule 310 Sections 301 – 310 at all times.

[SIP Rule 310 §§ 301-310, 302.3, 409]

33. Visible Emission Requirements for Dust-Generating Operations:

a. The Permittee shall not cause or allow visible fugitive dust emissions to exceed 20% opacity.

b. The Permittee shall not cause or allow visible emissions of particulate matter, including fugitive dust, beyond the property line within which the emissions are generated. Visible emissions shall be determined by a standard of no visible emissions exceeding 30 seconds in duration in any six-minute period as determined by using EPA Reference Method 22. This requirement does not apply to dust-

generating operations conducted within 25 feet of the property line.

[SIP Rule 310 §303.1]

34. Exemptions from Dust-Generating Operation Opacity Limitation Requirement:

a. If wind conditions cause fugitive dust emissions to exceed the opacity requirements in this permit, despite implementation of the Dust Control Plan an owner and/or operator shall:

i. Ensure that all control measures and requirements of the Dust Control Plan are implemented and the subject violations cannot be prevented by better application, operation, or maintenance of these measures and requirements.

ii. Cease dust-generating operations and stabilize any disturbed surface area consistent with the Stabilization Requirements of Section 304.3 of Rule 310.

iii. Compile records consistent with the recordkeeping requirements of these Permit Conditions and document the control measure and other Dust Control Plan requirements implemented.

b. Emergency Maintenance of Flood Control Channels and Water Retention Basins: The opacity limit shall not apply to emergency maintenance of flood control channels and water retention basins, provided that control measures are implemented.

[SIP Rule 310 §303.2]

35. Soil Moisture:

If water is the chosen control measure in an approved Dust Control Plan, the owner and/or operator of a dust-generating operation shall operate a water application system on-site (e.g., water truck, water hose) while conducting any earthmoving operations on disturbed surface areas 1 acre or larger, unless a soil crust is maintained or the soil is sufficiently damp to prevent loose grains of soil from becoming dislodged.

[SIP Rule 310 §307]

36. Dust Control Training Classes for Dust-Generating Operations:

a. At least once every three years, the following people shall successfully complete a Basic Dust Control Training Class conducted or approved by the Control Officer.

i. Water truck drivers.

ii. Water-pull drivers.

iii. The site superintendent or other designated on-site representative of the permit holder.

b. Any certification issued to a person having successfully completed a Basic Dust Control Training Class conducted or approved by the Control Officer may be suspended or revoked for cause, including, but not limited to, inappropriate ethical activities or conduct associated with the dust control program.

[SIP Rule 310 §309.1]

37. Dust Control Plan Revisions

a. If the Control Officer determines that an approved Dust Control Plan has been followed, yet fugitive dust emissions from any dust-generating operation still exceed the standards of this Permit, the Control Officer shall issue a written notice to the owner and/or operator of the dust-generating operation explaining such determination. The owner and/or operator of a dust-generating operation shall make written revisions to the Dust Control Plan and shall submit such revised Dust Control Plan to the Control Officer within three working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon request, for good cause. During the time that such owner and/or operator is preparing revisions to the approved Dust Control Plan, such owner and/or operator must still comply with all requirements of this Permit.

[SIP Rule 310 §403.1]

b. The Permittee shall request a Dust Control Plan revision with a submittal in the manner and form prescribed by the Control Officer if:

i. The acreage of a project changes;

ii. The permit holder changes;

iii. The name(s), address(es), or phone numbers of person(s) responsible for the submittal and implementation of the Dust Control Plan and responsible for the dust-generating operation change; and

iv. If the activities related to the purposes for which the Dust Control permit was obtained change.

[SIP Rule 310 §403.2]

38. Recordkeeping:

The Permittee shall maintain the following records for the time period specified in Permit Condition 39 and make them available to the Control Officer upon request:

a. The Permittee shall keep a written record of self-inspection on each day dust-generating operations are conducted. Self-inspection records shall include daily inspections for crusted or damp soil, trackout conditions and clean-up measures, daily water usage, and dust suppressant application. Such written record shall also include the following information:

i. Method, frequency, and intensity of application or implementation of the control measures;

ii. Method, frequency, and amount of water application to the site;

iii. Street sweeping frequency;

iv. Types of surface treatments applied to and maintenance of trackout control devices, gravel pads, fences, wind barriers, and tarps;

v. Types and results of test methods conducted;

vi. If contingency control measures are implemented, actual application or implementation of contingency control measures and why contingency control measures were implemented;

vii. List of subcontractors' names and registration numbers updated when changes are made; and

viii. Names of employee(s) who successfully completed dust control training class(es), date of the class(es) that such employee(s) successfully completed, and name of the agency/representative who conducted such class(es).

[SIP Rule 310 §502.1]

b. Upon verbal or written request by the Control Officer, the log or the records and supporting documentation shall be provided as soon as possible but no later than 48 hours after the request, excluding weekends. If the Control Officer is at the site where requested records are kept, records shall be provided without delay.

[SIP Rule 310 §§502, 503]

39. Records Retention:

The Permittee shall retain copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation for at least six months following the termination of the dust-generating operation and for at least two years from the date such records were initiated.

[SIP Rule 310 §503]

Non-Resale Gasoline Storage and Dispensing

40. Allowable Throughput:

The Permittee shall limit the delivery of gasoline to the facility to less than 10,000 gallons per month and 120,000 gallons per any twelve consecutive month time period.

[Rule 220 §302.2] [Locally Enforceable Only]

41. Operating Limitation:

The Permittee shall dispense no resold gasoline at the facility.

[Rule 220 §302.2] [Locally Enforceable Only]

42. General Duties to Minimize Emissions:

At all times, the Permittee shall operate and maintain each gasoline storage tank, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR §63.11115(a)]

43. Emission Limitations and Management Practices:

The Permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

a. Minimize gasoline spills;

b. Clean up spills as expeditiously as practicable;

c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

[40 CFR §§ 63.11116(a)]

44. Vapor Loss Control Measure Requirements:

The Permittee shall not transfer or permit the transfer of gasoline from any gasoline delivery vessel into any stationary dispensing tank located above or below ground with a tank capacity of more than 250 gallons unless the following requirements are met:

a. Basic Tank Integrity:

i. No vapor or liquid escapes are allowed through a dispensing tank's outer surfaces or from any of the joints where the tank is connected to pipe, wires, or other systems.

[Rule 353 §301] [Locally Enforceable Only]

ii. VOC Emission Standard:
Tanks and their fittings shall be vapor tight except for the outlet of a pressure/vacuum relief valve on a dispensing tank's vent pipe. Specifically, this means that at a probe tip distance of 1 inch (2.5 cm) from a surface, no vapor escape shall exceed 20% of the lower explosive limit (LEL). This applies to tanks containing gasoline regardless of whether they are currently being filled, and to caps and other tank fittings.

For the purpose of this Permit, vapor tight is defined as a condition in which an organic vapor analyzer (OVA) or a combustible gas detector (CGD) at a potential VOC leak source shows either less than 10,000 ppm when calibrated with methane or less than 20% of the LEL, when prepared according to the manufacturer and used according to Rule 353, Section 504.3

[Rule 353 §§218, §301.1(b)] [Locally Enforceable Only]

iii. Leakage Limits: For storage and receiving operations, no liquid gasoline escape of more than 3 drops per minute is allowed, including leaks through the walls of piping, fittings, fill hose(s), and vapor hose(s). Gasoline drainage loss from the end of a fill hose or a vapor hose shall not exceed 2 teaspoonsful in the course of a connect or disconnect process.

[Rule 353 §301.2; SIP Rule 353 §301.3]

iv. Spill Containment Equipment:

1) The entire spill containment system including gaskets shall be kept vapor tight.

a) The outer surface of the spill containment receptacle shall have no holes or cracks and shall allow no vapors to pass from the dispensing tank through it to the atmosphere.

b) Spill containment receptacles shall be kept clean and free of foreign material at all times.

[Rule 353 §301.3(a)] [Locally Enforceable Only]

2) If the spill containment is equipped with a passageway to allow material trapped by the containment system to flow into the interior of the dispensing tank:

a) The passageway shall be kept vapor tight at all times, except during the short period when a person opens the passageway to immediately drain material trapped by the containment system into the tank.

b) The bottom of the receptacle shall be designed and kept such that no puddles of gasoline are left after draining through the passageway has ceased.

[Rule 353 §301.3(b)] [Locally Enforceable Only]

3) The dispensing tank owner/operator is responsible for assuring that before a delivery vessel leaves the premises after a delivery:

a) Any gasoline in a dispensing tank's spill containment receptacle has been removed.

b) Any gasoline that a person has taken out of a spill receptacle, as a free liquid or as absorbed into/onto other material removed from the receptacle, shall be contained in such a way that VOC emission is prevented; disposal in conformance with applicable hazardous waste rules is sufficient to meet this requirement.

c) Any plunger/stopper assembly is unimpeded and sealing correctly.

[Rule 353 §301.3(c)] [Locally Enforceable Only]

4) Criteria of Violation/Exceedance for Spill-Containment Receptacles: A reading on a CGD or OVA exceeding 20% LEL (10,000 ppm as methane) is an exceedance.

[Rule 353 §301.3(d)] [Locally Enforceable Only]

b. Fill Pipe Requirements:

i. Submerged Fill Pipe:

1) Each fill-line into a stationary dispensing tank shall be equipped with a permanent submerged fill pipe that has a discharge opening which is completely submerged when the liquid level is 6 inches above the tank bottom.

[Rule 353 §302.1][SIP Rule 353 §301.1]

2) Threads, gaskets, and mating surfaces of the fill pipe assembly shall be designed and maintained tight. There shall be no liquid or vapor leakage at the joints of the assembly.

[Rule 353 §302.1(a)] [Locally Enforceable Only]

ii. Fill Pipe Caps:

1) The cap shall have a securely attached, intact gasket.

2) The cap and its gasket shall always function properly, latch completely so that it cannot then be easily twisted by hand, and have no structural defects.

3) The cap of a gasoline fill pipe shall always be fastened securely on the fill pipe except immediately before, during, and immediately after:

a) "Sticking" the tank to measure gasoline depth

b) Delivering gasoline into the tank

c) Doing testing, maintenance or inspection on the gasoline/vapor system

4) The Permittee shall not unfasten or remove a fill pipe cap unless every other fill pipe is either securely capped or connected to a delivery hose, except as otherwise needed for testing, maintenance, or inspection.

[Rule 353 §302.2] [Locally Enforceable Only]

iii. Multiple Fill Pipes:

A tank installed after December 31, 1998 shall not be equipped with more than one fill pipe. Concurrent delivery of gasoline to a tank with more than 1 fill pipe is prohibited.

[Rule 353 §302.3] [Locally Enforceable Only]

iv. Fill Pipe Obstructions:
No screen and/or other obstructions in fill pipe assemblies shall be allowed unless it is CARB-certified or does not prevent the measurement of how far the end of the fill pipe is from the bottom of the tank (overfill protection flappers are acceptable). Allowed screens and/or other obstructions shall be temporarily removed by the Permittee of a dispensing tank prior to inspection by the Control Officer to allow measurements pursuant to this Permit.

[Rule 353 §302.4] [Locally Enforceable Only]

v. Overfill protection equipment shall be kept vapor tight so that no emissions from the tank can penetrate into the fill-pipe or atmosphere.

[Rule 353 §302.5] [Locally Enforceable Only]

45. Inspection Requirements:

a. The Permittee shall inspect spill containment receptacles weekly for cracks, defects, foreign material, and spilled gasoline. Records shall be maintained as specified below.

[Rule 353 §301.3(a)(3)] [Locally Enforceable Only]

b. External fittings of the fill pipe assembly shall be inspected weekly to assure that the cap, gasket, and piping are intact and are not loose.

[Rule 353 §302.1(b)] [Locally Enforceable Only]

c. If deliveries are less than weekly, inspection and recording of the inspection at the time of each delivery will be considered an acceptable alternative to the weekly inspection and recordkeeping requirements of the rule.

46. Recordkeeping Requirements:
The Permittee shall keep the following records and supporting information no less than five years from the date of such record:

a. The total amount of gasoline received each month shall be recorded by the end of the following month.

b. Weekly inspection records of the fill pipe and spill containment shall be recorded by the end of Saturday of the following week.

c. Records of the last 12 months of gasoline throughput shall be onsite and readily available within 24 hours of a request by the Control Officer.

[Rule 353 §502] [SIP Rule 353 §502] [40 CFR §§ 63.11111(e)]

GENERAL CONDITIONS

47. Posting of Permit:
This Permit shall be posted in a clearly visible and accessible location on the site where the equipment is installed.

[Rule 200 §312]

48. Compliance:

a. The issuance of any Permit or Permit revision shall not relieve the Permittee from compliance with any Federal laws, Arizona laws, or the County or SIP Rules, nor does any other law, regulation or permit relieve the Permittee from obtaining a Permit or Permit revision required under the County Rules.

[Rule 200 §309][Rule 220 §406.3][Locally Enforceable Only]

b. The Permittee shall comply with all conditions of this Permit including all applicable requirements of Federal laws, Arizona laws, and Maricopa County Air Pollution Control Rules and Regulations now in effect and as amended in the future. Any Permit noncompliance is grounds for enforcement action, Permit termination or revocation, or for denial of a renewal application. In addition, non-compliance with any federally enforceable requirements constitutes a violation of the Clean Air Act.

[A.A.C. R18-2-306.A.8.a][Locally Enforceable Only]

c. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with these Permit Conditions.
[Rule 220 §302.10][A.A.C. R18-2-306.A.8.b][Locally Enforceable Only]

d. Rights and Privileges: This Permit does not convey any property rights or exclusive privilege of any sort.
[Rule 220 §302.12][Locally Enforceable Only]

e. Fees: The Permittee shall pay all fees to the Control Officer in accordance with Rule 280. No permit or permit revision is valid until the applicable permit fee has been received and until the permit is issued by the Control Officer.
[Rule 200 §409][Rule 280 §302][A.R.S. 49-480(D)][SIP Rule 28]

49. Malfunctions, Emergency Upsets, and Excess Emissions:
An affirmative defense of an emergency, excess emission, and/or during startup and shutdown shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence as outlined in Rule 130 for emergencies and Rule 140 for excess emissions.
[Rule 130 §§201, 400][Rule 140 §§400, 500][SIP Rule 140]

50. Revision / Reopening / Revocation:
The Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.
[Rule 220 §302.11][Locally Enforceable Only]

51. Records:

a. The Permittee shall furnish information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing this permit, or terminating this permit, or to determine compliance with this permit. The information shall be provided in a timeframe specified by the Control Officer. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by this Permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records directly to the Administrator along with a claim of confidentiality.
[Rule 220 §302.13][SIP Rule 40]

b. If the Permittee fails to submit any relevant facts or has submitted incorrect information in a permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, the Permittee shall provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application is filed but prior to release of a proposed permit. Willful misrepresentation of facts in a permit application is cause for revocation or denial of a permit.
[Rule 220 §§301.5, 301.6][Locally Enforceable Only]

52. Right to Entry:

a. The Control Officer during reasonable hours, for the purpose of enforcing and administering County or SIP Rules or the Clean Air Act, or any provision of the Arizona Revised Statutes relating to the emission or control prescribed pursuant thereto, may enter every building, premises, or other place, except the interior of structures used as private residences. Every person is guilty of a petty offense under A.R.S. 49-488 who in any way denies, obstructs or hampers such entrance or inspection that is lawfully authorized by warrant.

b. The Permittee shall allow the Control Officer or his designated representatives, upon presentation of proper credentials (e.g., Maricopa County Air Quality Department identification) and other documents as may be required by law, to:

i. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept pursuant to the conditions of the permit;

ii. Have access to and copy, at reasonable times, any records that are required to be kept pursuant to the conditions of the permit;

iii. Inspect, at reasonable times, any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required pursuant to this permit;

iv. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the Permit or other applicable requirements; and

v. To record any inspection by use of written, electronic, magnetic, and photographic media.

[Rule 100 §105][Rule 220 §302.17-21][SIP Rule 43]

53. Severability:

The rules, paragraphs, clauses, provisions, and/or sections of this Permit are severable, and, if any rule, paragraph, clause, provision, and/or section of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.

[Rule 220 §302.9][SIP Rule 80]